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On Terms

Behavioral Coaching

Holly A. Seniuk, Benjamin N. Witts, W. Larry Williams, and Patrick M. Ghezzi
University of Nevada, Reno

The term *behavioral coaching* has been used inconsistently in and outside the field of behavior analysis. In the sports literature, the term has been used to describe various intervention strategies, and in the organizational behavior management literature it has been used to describe an approach to training management personnel and staff. This inconsistency is problematic in terms of the replication of behavioral coaching across studies and aligning with Baer, Wolf, and Risley's (1968) technological dimension of applied behavior analysis. The current paper will outline and critique the discrepancies in the use of the term and suggest how Martin and Hrycaiko's (1983) characteristics of behavioral coaching in sports may be used to bring us closer to establishing a consistent definition of the term. In addition, we will suggest how these characteristics can also be applicable to the use of the term *behavioral coaching* in other domains of behavior analysis.

Key words: behavioral coaching, on terms, technology, replication

The term *coaching* refers to "the process of training somebody to play a sport, to do a job better or to improve a skill" (Oxford Advanced Learner's Dictionary, 2011). Although there is no clear definition of *behavioral coaching,* the term suggests a behavioral approach to accomplishing the goals of coaching (e.g., Komaki & Barnett, 1977; Shapiro & Shapiro, 1985). In recent years, this term has gained popularity in the behavior-analytic literature. However, given the lack of a clear definition, it has been and is currently being used inconsistently. In the behavioral sports literature, the term has been used as a general procedure for training athletes as well as a type of intervention (e.g., Stokes, Luiselli, & Reed, 2010; Stokes, Luiselli, Reed, & Fleming, 2010, respectively). In the business world, the term is frequently used to describe an approach to managing employees within an organization (see Continuous Learning Group, 2013a; Daniels, 2013). The inconsistent use of the term presents a problem for the science of behavior. From a behavior-analytic viewpoint, when there are multiple interpretations of definitions and procedures we lose the technological dimension (Baer, Wolf, & Risley, 1968), which in turn presents difficulties for replication and consistency both in research and in practice.

Sports

The concept of a behavioral approach to coaching athletes was first introduced to the behavioral sports literature in Komaki and Barnett (1977). Their intervention was designed for coaches to improve the execution of three specific plays by providing players a description of each play, feedback on the accuracy of the play during practice, and modeling correct performance that was faded contingent on success. The authors found that this method of coaching was superior to traditional methods (e.g., verbal description and feedback that focused primarily on incorrect responses). Since then, the

Correspondence concerning this article should be addressed to Holly A. Seniuk, Department of Psychology, Mail Stop 296, University of Nevada, Reno, Reno, Nevada 89557 (e-mail: holly.seniuk@gmail.com).

term *behavioral coaching* has been used to describe this sort of approach.

Of all the articles pertaining to sports in behavior-analytic journals, only four directly refer to behavioral coaching as a type of intervention. For example, the term *behavioral coaching* as an intervention strategy was first used by Allison and Ayllon (1980) in a study on football, gymnastics, and tennis. Their behavioral coaching intervention package, building on the concept used by Komaki and Barnett (1977), consisted of five components: (a) instruction, (b) judging the response, (c) feedback, (d) modeling, and (e) imitation. This multicomponent intervention package was demonstrated to be effective in increasing the correct execution of skills for participants in all three sports.

Fitterling and Ayllon (1983) and Shapiro and Shapiro (1985) used the same components outlined by Allison and Ayllon (1980) to compare the behavioral coaching approach to standard coaching in ballet and track, respectively. These studies found that behavioral coaching was superior to standard coaching in teaching target skills to athletes. Both Fitterling and Ayllon and Shapiro and Shapiro used a multiple baseline design (reversal included in Fitterling & Ayllon) across three skills to demonstrate that individuals performed more trials correctly in the behavioral coaching conditions.

Although these three studies (Allison & Ayllon, 1980; Fitterling & Ayllon, 1983; Shapiro & Shapiro, 1985) used the same components in their behavioral coaching intervention, other studies have effectively used different strategies in what they call a behavioral coaching intervention. For example, Stokes, Luiselli, Reed, and Fleming (2010) compared descriptive feedback with and without video and teaching with acoustical guidance (TAG). The authors found that descriptive feedback with video as well as TAG were more effective than descriptive feedback alone in improving offensive line pass-blocking skills with high school and varsity football players.

Furthermore, Stokes and Luiselli (2010) found that a functional analysis was an important component in the development of a behavioral coaching technique to improve tackling that involved delayed written feedback on performance. They conducted a functional analysis with a high school football player to determine that escape from coach feedback was capable of maintaining correct responding. These results were then used in the development of an intervention in which the coach provided written feedback after the practice. This intervention resulted in improved tackling in both practice and game settings.

A review of the articles using a behavioral approach to improving athlete behavior revealed that numerous studies either used some components of the behavioral coaching intervention described above (e.g., feedback, modeling, and imitation) or other coaching methods of a behavioral nature, but did not refer to the intervention as behavioral coaching. For example, Stokes, Luiselli, and Reed (2010) used a behavioral intervention to teach tackling skills to high school football players. Coaches were trained to refrain from making negative comments for incorrect performance and to provide positive reinforcement for correct performance in the form of stickers on the players' helmets. The authors found this coaching approach to be effective in improving tackling skills.

Still other studies used components of the behavioral coaching intervention package described by Allison and Ayllon (1980) and Fitterling and Ayllon (1983). For example, in the behavioral literature on interventions in sport behavior, 13 articles included feedback as a component of the intervention, and others cited instruction ($n = 1$), modeling ($n = 2$), or prompting ($n = 1$) as part of the intervention. For example, Boyer,

Miltenberger, Batsche, and Fogel (2009) used a combination of video modeling and feedback to improve the execution of skills of four female gymnasts.

Overall, the behavior-analytic literature pertaining to sports indicates that a behavioral approach to teaching athletic skills can be effective. However, the review also suggests the need for a consensus on what behavioral coaching is and how it can be used to improve athletic behavior.

Organizational Behavior Management (OBM)

The term *coaching* was first used in OBM in the 1980s as a metaphor for the behavior of team leaders, executives, and managers, with respect to how they interacted with their employees or subordinates (Brown, 2001). Brown identified language as an important factor in connecting behavior analysis with businesses. Thus, he explains how early in his career he began using the term *coaching* to break the cultural barrier between these two institutions (Brown, 2001).

Stern (2004) provides a definition of an executive coach as someone who provides individualized consultation to help a leader achieve long- and short-term goals in organizational settings. Goldsmith (2000) suggests that the process of behavioral coaching involves the ongoing collection of feedback regarding the manager's behavior, analyzing it, and developing appropriate behavior-change plans for managers to improve interactions with their staff. In addition, numerous books (e.g., Skiffington & Zeus, 2003) and companies (e.g., Behavioral Coaching Institute) have provided information and strategies for behavioral coaching in organizational settings.

Aubrey Daniels International, a leader in research and practice in OBM, offers a program titled Coaching for Rapid Change in which a behavior specialist guides managers through learning to use tools such as planning, touchpoints (e.g., contact with a consumer), and data collection to improve staff performance (Daniels, 2013). The Continuous Learning Group provides another example of an organization that uses the science of behavior in OBM. This organization considers applied behavioral science to be a teaching and coaching approach used by managers and other leaders in organizations. Consultants within this organization coach leaders of other organizations in the use of applied behavioral science to improve employee performance (Continuous Learning Group, 2013a).

For example, a case study from the Continuous Learning Group reported that their coaches were able to assist the business unit of a major oil company in both reducing costs as well as increasing revenue through increased production. In this example, *coaching* referred to the process of training leaders to set clear expectations, hold people accountable for their commitments, and provide feedback that is both positive and frequent (Continuous Learning Group, 2013b).

Although the term is frequently used in OBM by organizations and consultants, it is scarce within the scientific literature, although numerous studies report the use of coaching strategies similar to those used in the sports literature. For example, feedback is arguably one of the most prominently used intervention strategies in OBM (e.g., Emmert, 1978; Goomas, Smith, & Ludwig, 2011; Wittkopp, Rowan, & Poling, 1991). The use of behavioral coaching in practice and not in the literature can be problematic, in that various organizations may promote variations of behavioral coaching. Although the various strategies that fall under the umbrella of behavioral coaching have been examined in the OBM literature, the concept of behavioral coaching as an intervention strategy has not

enjoyed the investigative resources here that it did in the sport literature.

Defining Behavioral Coaching

A review of the literature in both sports and OBM suggests that there is an inconsistent use of the term *behavioral coaching.* It appears to be the case that in some instances the term is used to describe a type of intervention package, in others it is used to describe any guidance or teaching that is provided a by a leader; there are also many instances in which an intervention package is not described as behavioral coaching but very closely resembles other intervention packages with that name.

Although many of the studies reviewed here incorporate the term *behavioral coaching* in their work, the question remains: "What exactly is behavioral coaching?" It could be argued from these articles that anything that a coach, broadly defined, does that has a behavior-analytic orientation could be classified as behavioral coaching. This poses a problem with respect to teaching others what behavioral coaching is and how to effectively execute it. In addition, if we as a field continue to describe behavioral coaching in idiosyncratic ways, the empirical validation of behavioral coaching as an effective strategy is nearly impossible, especially when one considers that one of the most important aspects of science is replication (Cooper, Heron, & Heward, 2007, p. 6; see also Baer, Wolf, & Risley, 1987).

As an alternative to the abovementioned formulations of behavioral coaching, Martin and Hrycaiko (1983) outlined what they thought to be the characteristics of effective behavioral coaching with respect to athletic performance. Martin and Hrycaiko developed these characteristics based on the dimensions of applied behavior analysis as described by Baer et al. (1968). According to Martin and Hrycaiko, there are six characteristics of effective behavioral coaching.

The first characteristic is that the coaching involves the emphasis on measurement of athletic performance that it is specific, detailed, and frequent. Second, there is a clear distinction between the development and maintenance of behavior, and positive procedures are emphasized for accomplishing both. The third characteristic suggests that the intervention be focused on athletes' improvement is measured against their own performance. Thus, behavioral coaching does not compare athletes to each other but rather compares each individual to him- or herself. The fourth characteristic is that the coaching utilizes specific behavioral procedures that have been experimentally demonstrated to be effective. In being specific, Martin and Hrycaiko (1983) mean that the procedures can be replicated and effectiveness can be evaluated through data monitoring. This characteristic subsumes the previous sport research and aligns them under a general framework. The fifth characteristic places emphasis on the behavior of the coach. Not only are behavior techniques used to improve the performance of the players but of the coach as well. For example, video can be used to provide feedback to players on their behavior as well as for coaches to evaluate their own behavior toward the players. The final characteristic deals with social validity, in which measures are taken to ensure that the techniques used target behaviors that are important to the players, parents, and others involved in the program, that these individuals find the intervention techniques acceptable, and that they are satisfied with the results.

Martin and Hrycaiko (1983) present a sound, encompassing definition of behavioral coaching. If we as a field are going to promote behavioral coaching as a performance improvement strategy, we must first verify its

effectiveness. Much like the dimensions of applied behavior analysis outlined by Baer et al. (1968), the characteristics developed by Martin and Hrycaiko are precise enough to allow identification of whether what is being evaluated is behavioral coaching or not, as well as to allow replication. In addition, the characteristics are appropriately broad enough to include a variety of validated behavioral techniques.

The characteristics outlined by Martin and Hrycaiko (1983) provide a method by which to evaluate behavioral coaching across the literatures. Should it be found that multiple studies meet these criteria, it could be argued that the definition permits replication and, thus, empirical analysis of behavioral coaching. These characteristics also allow technology to be used within and across subdivisions of the field of behavior analysis in a consistent manner, thus enabling behavior analysts to move forward with research on behavioral coaching. Specifically, if one removes the term *athlete* from Martin and Hrycaiko's six characteristics, then their behavioral coaching strategy can encompass both the sports literature and the improved performance of managers. That is, in all cases, a general framework that focuses on frequent measurement of target behaviors of participants, development and maintenance of target behaviors, comparison of an individual's improvement to the individual's previous performance, the consistent use of behavioral procedures for which effectiveness has been experimentally demonstrated, self-monitoring and self-evaluation by the coach, and a vigilant assessment of social validity should be applicable and useful in any subdomain of behavior analysis. Stated simply, there is no aspect of Martin and Hrycaiko's six characteristics that belong exclusively to athletics, and thus can be used effectively in other areas of research and application. Our argument, then, is one that enables more effective analysis within and across domains when these strategies are employed in a single packaged intervention.

Furthermore, the characteristics outlined by Martin and Hrycaiko (1983) allow better packaging and dissemination of behavioral coaching. Having a packaged framework enables practitioners to implement effective guidelines that address several areas of concern. The results of these interventions, if shared among researchers, is more readily consumed and integrated into the growing body of literature on this approach to performance improvement.

Behavioral Coaching versus Alternative Strategies

Given the current lack of a consensus on the term *behavioral coaching* and what is encompassed by that term, we suggest that a clear definition of the term be determined. We suggest the use of the characteristics of Martin and Hrycaiko (1983) as a starting point. As mentioned above, this would create a term that is broad enough to encompass both sports and OBM, yet be specific enough to allow replication in each domain.

We recognize that a great amount of work is being conducted that involves guidance provided by a behavior specialist, leader, or coach in both sports and OBM. However, this work does not always meet the criteria set out by Martin and Hrycaiko (1983) and therefore should not be called behavioral coaching. This work is valuable and should continue; however, it is recommended that this sort of work be labeled something more appropriate, such as behavior consultation (see Williams, 2000), or be analyzed based on the components used (e.g., public posting in sports). Maintaining a distinction between behavioral coaching and other intervention strategies is necessary to advance our science. As mentioned previously, for further

research to be conducted on behavioral coaching, the first step is to determine a clear definition to permit replication. From there we can examine the effectiveness of behavioral coaching in various settings. To date the best conclusion that we can make is that behavioral approaches in sports and organizations are effective. However, the right to make claims about the effectiveness of behavioral coaching is not yet ours.

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